

# Specifications

## FOX T USW 103

**NOTE:** The FOX T USW 103 is not compatible with the FOX 3G HD-SDI, FOX 3G DVC, or FOX AV models.

**NOTE:** These units are class 1 laser products. They meet the safety regulations of IEC-60825.

**NOTE:** \*Appropriate HDMI to DVI-D cables or adapters are required for DVI signal input/output.

### Optical fiber interconnection between transmitter and receiver

Number/type.....	1 or 2 fiber optic
Connectors.....	2 LC connectors
Operating distance	
Singlemode .....	30 km (18.75 miles) with singlemode (SM) cables with a SM unit
Multimode .....	300 m (984') with 62.5 $\mu$ m OM1 multimode (MM) cables with a MM unit
	1 km (3280') with 50 $\mu$ m OM2 multimode (MM) cables with a MM unit
	2 km (6561') with 50 $\mu$ m OM3/OM4 2000 MHz bandwidth laser optimized multimode cable with a MM unit

**NOTE:** Operating distance is approximate. These are typical maximum distances that may vary depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.

Nominal peak wavelength .....	850 nm for MM units, 1310 nm for SM units
Data rate.....	4.25 Gbps
Maximum pixel clock.....	165 MHz
Transmission power	
Singlemode .....	-5 dBm, typical
Multimode .....	-5 dBm, typical
Maximum receiver sensitivity	
Singlemode .....	-18 dBm, typical
Multimode .....	-12 dBm, typical
Optical loss budget	
Singlemode .....	13 dB, maximum
Multimode .....	7 dB, maximum

### Video

Digital	
Resolution range .....	640x480 up to 1920x1200, 480p, 576p, 720p, 1080i, 1080p @ 60 Hz sampled pixel for pixel; higher resolution 2K (2048x1080) @ 60 Hz undersampled
Formats.....	RGB and YCbCr digital video
Standards.....	DVI 1.0, HDMI compliant, HDCP 1.1, CEA-861E
Analog	
Maximum resolution .....	Up to 1920x1200 or 1080p @ 60 Hz pixel for pixel
Signal type .....	VGA-UXGA RGBHV, RGBS, component video
Gain .....	Unity
Pixel data bit depth.....	8 bits per channel, 3 channels (R, G, B; or YUV)

## Video input

### Digital

Number/signal type .....	2 HDMI, DVI, or DisplayPort
Connectors .....	2 female HDMI
Equalization .....	Up to 50' of cable

### Analog

Number/signal type .....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs, component video (YUVp/HDTV)
Connectors .....	1 female 15-pin HD
Nominal level.....	1 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels .....	Analog: 0.3 V to 0.75 Vp-p with no offset, terminated
Impedance.....	75 ohms
Horizontal frequency .....	30 kHz to 100 kHz
Vertical frequency.....	24 Hz to 120 Hz
Return loss .....	<-40 dB @ 5 MHz

## Sync

Input type .....	RGBHV, RGBS, RGsB, RsGsBs, bi-level and tri-level component video (480p, 576p, 720p, 1080i, 1080p)
Input level .....	2.5 V to 5.0 Vp-p for RGBHV or RGBS 0.6 Vp-p for component video with tri-level sync 0.3 Vp-p for component video with bi-level sync
Input impedance .....	510 ohms
Polarity.....	Positive or negative (follows input or can be set by user)

## Audio

### Gain

Range .....	Adjustable, -18 dB to +10 dB
Default.....	Unbalanced output: -6 dB
Frequency response .....	20 Hz to 20 kHz, $\pm 0.5$ dB
THD + Noise .....	0.10% @ 1 kHz at nominal level
S/N.....	>80 dB at maximum output (unweighted)
Audio bits per sample .....	18 bits per channel, 2 channels (L, R)
Sampling rate.....	48 kHz

## Audio input

Number/signal type.....	1 unbalanced stereo
Connectors .....	(1) 3.5 mm mini stereo jack
Impedance.....	>10k ohms unbalanced
Nominal level.....	-10 dBV (316 mVrms)
Maximum level .....	+7 dBV unbalanced

**NOTE:** 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV  $\approx$  2 dBu

## Communications

Serial control ports	
Control .....	1 RS-232, 3.5 mm captive screw connector, 3 pole (rear panel)
Pass-through.....	1 RS-232, 3.5 mm captive screw connector, 5 pole (3 pins are used, "RS-232 Over Fiber", shared with alarm port) (rear panel)
Baud rate and protocol	
Control .....	9600 baud, 8 data bits, 1 stop bit, no parity
Pass-through.....	9600 to 115,200 baud
Serial control pin configuration .....	1 = Tx, 2 = Rx, 3 = GND
USB control port.....	1 front panel female mini USB B
USB standards .....	USB 2.0, low speed
Contact closure .....	(1) 3.5 mm captive screw connector, 4-pole
Contact closure pin configuration...	1 = input 1, 2 = input 2, 3 = input 3, 4 = GND
Program control .....	Extron control/configuration program for Windows® Extron Simple Instruction Set (SIS™)

## General

Power supply .....		External
		Input: 100-240 VAC, 50-60 Hz
		Output: 12 VDC, 1 A, 12 watts
Power consumption		
Device .....	6.2 watts, 12 VDC	
Device and power supply .....	7.6 watts, 100-240 VAC, 50-60 Hz	
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing	
	Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing	
Cooling .....	Convection, vents on top and side panels	
Thermal dissipation		
Device .....	21.1 BTU/hr	
Device and power supply .....	25.7 BTU/hr	
Mounting		
Rack mount.....	Yes, with optional rack shelf	
Furniture mount .....	Yes, with optional under desk mounting kit	
Enclosure type .....	Metal	
Enclosure dimensions .....	1.0" H x 8.75" W x 6.0" D (half rack wide)	
	(Depth excludes connectors.)	
Product weight .....	1.0 lbs (0.3 kg) per unit	
Shipping weight .....	3 lbs (2 kg)	
Vibration .....	ISTA 1A in carton (International Safe Transit Association)	
Regulatory compliance		
Safety .....	CE, c-UL, UL	
EMI/EMC.....	CE, C-tick, FCC Class A, ICES, VCCI	
Environmental.....	Complies with the appropriate requirements of RoHS, WEEE	
Warranty .....	3 years parts and labor	

**NOTE:** All nominal levels are at  $\pm 10\%$ .

**NOTE:** Specifications are subject to change without notice.

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